ISR

INTERDISCIPLINARY SCIENCE REVIEWS

Volume 9

Dr Anthony R. Michaelis
Editor

ISCRDB 9(1–4) 1–374 (1984)
ISSN 0308–0188

J W Arrowsmith

CONTRIBUTIONS

NUMBER 1

Editorial: **The Sorcerer's Apprentice**	A. R. Michaelis	1
Comment: **Perceptive Science**	R. L. Gregory	4
The Physical Bases of Perception	N. H. Fletcher	6
Sensation and Movement	D. I. McCloskey	14
Hearing the Sounds of Music	C. A. Taylor	20
Perceptual Systems for Robots	M. A. Aribib, K. J. Overton and D. T. Lawton	31
The Nature of Perceptual Illusions	R. H. Day	47
Advances in Laser Spectroscopy	A. L. Schawlow	59
The Selby Project: Britain's Greatest Coal Mine	C. T. Massey and J. Stenton	70
The Lexicography of Science	J. B. Sykes	82
Book Reviews:		
Art and Science	G. S. Stent	86
Carbon Dioxide Review: 1982	Sir Arthur Vick	90
Chemical Criminalistics	M. Gloger	92
The Business of Biotechnology	P. Präve	93
Mathematical Humour	A. Kohn	94
The Calculating Boy	G. E. Darwin	94
The History of the NPL	A. A. Needell	95
Radioactive Waste Problems	R. Proske	96

NUMBER 2

Editorial: **More Chemistry – More Food**	A. R. Michaelis	97
Comment: **The Engineers' Subculture**	A. Schmidt	100
Comment: **Macro-Engineering**	F. P. Davidson	103
Stereochemistry of Life	Sir John Cornforth	107
Geodesy's Contribution to Geophysics	R. Rummel	113
Interdisciplinary Palaeontology	W. Stürmer	123
The Carrying Capacity Concept	S. Nilsson	137
Fluctuating Food Fashions	N. W. Pirie	149
Fashions in Physics	H. O. K. Kirchner	160
The Psychology of Science	D. R. Biggins	172
Little Slips and Big Disasters	J. Reason	179
Book Reviews:		
A Century of Naval Construction	A. Preston	190

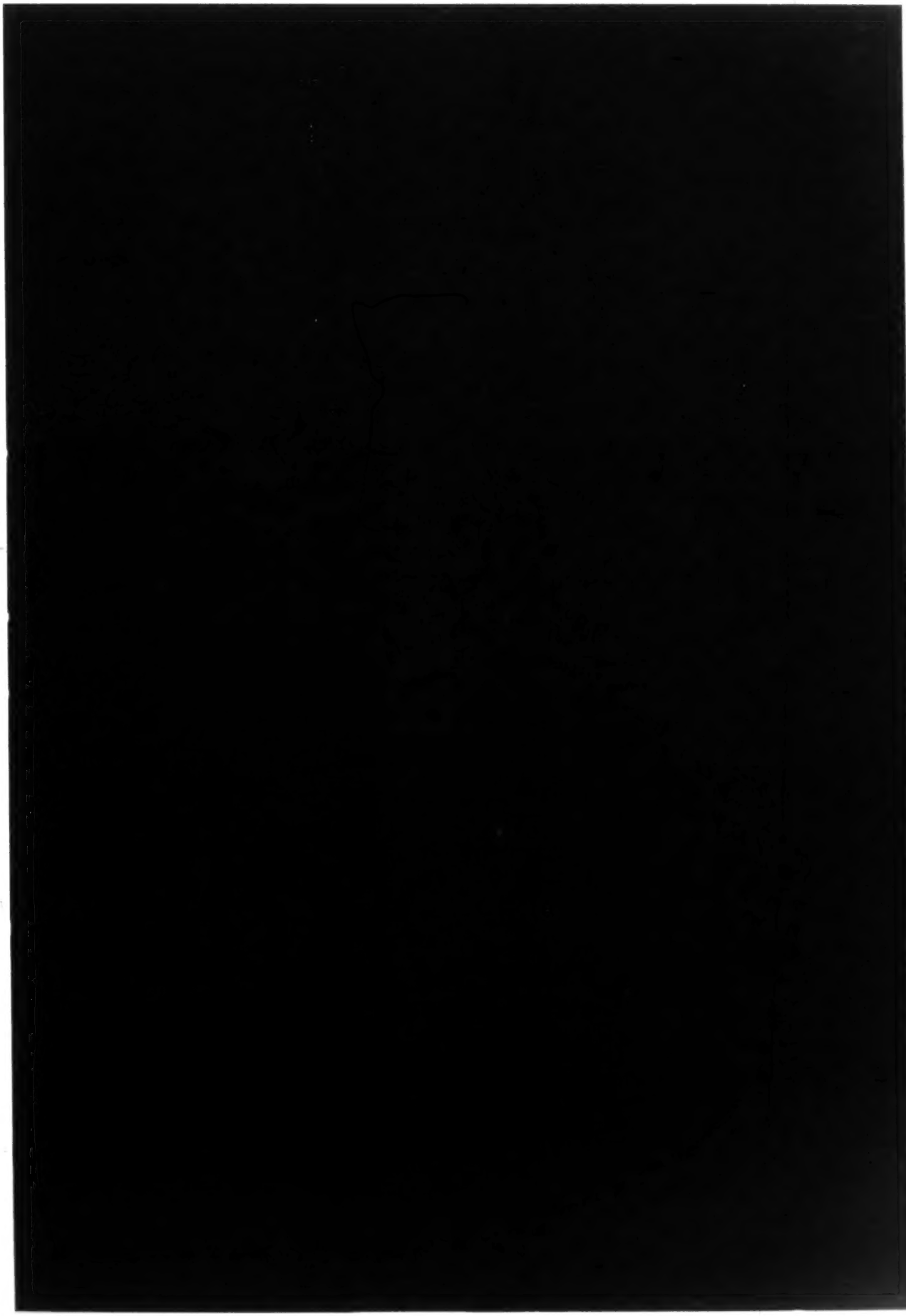
The Petrology of Archaeological Artefacts	T. Shaw,	190
The Sense of Smell	L. Narodny	191

NUMBER 3

Editorial: **Interdisciplinary Disaster Research**	A. R. Michaelis	193
Comment: **Know Thy Neighbor as Thyself**	S. D. Ripley	196
Comment: **Unemployment – Curse or Liberation?**	M. Jahoda	200
Comment: **Rural Resources in Africa: Development from Below Needed**	J. A. Binns	202
The Scientist as University President	Lord Ashby	205
Is Economics a Science?	Sir John Hicks	213
The Economics of Australian Mineral and Energy Resources	S. Bambrick	220
Hallmarking – Seven Centuries of Assaying and Consumer Protection	J. S. Forbes	230
Helioseismology	D. Gough	240
Colour and its History	J. Gage	252
Women Scientists in India: Their Position and Role	S. Gurnani and M. Sheth	259
Synthetic Antigens and Vaccines	M. Sela and R. Arnon	271
Book Reviews:		
Robots in Manufacturing	F. D. Barrett	284
Macro-Engineering	Sir Robert Jackson	287
Scientific Instruments of the 19th Century	A. R. Michaelis	288

NUMBER 4

Editorial: **Past is But Prologue**	A. R. Michaelis	289
Introduction to Heavy Ion Research	G. Freiher zu Putlitz	291
Heavy Ion Accelerators	D. Böhne	294
Nuclear Reactions Induced by Heavy Ions	R. Bock, H. Emling and K. D. Hildenbrand	305
Exotic Nuclei	G. Herrmann	313
Atomic Physics	P. Armbruster, H. Beyer, F. Bosch H. D. Dohmann, C. Kozhuharov, D. Liesen, R. Mann and P. H. Mokler	321
Biological and Medical Research with Heavy Ions	G. Kraft	326
Applied Heavy Ion Research	B. E. Fischer and R. Spohr	329
Outlook	G. Freiher zu Putlitz	336
America's Independence: Political and Scientific	M. Rothenberg	339
Tidal Power in the United Kingdom	A. C. Baker	347
Neurobiology and Behavior: A Critical Interface	S. C. Bondy and L. Uphouse	358

Book Reviews:

Future Weather	H. H. Lamb	365
Man in the Centre	G. B. Gresford	
The Great Chain of History	H. Harvey	
Agricultural Research Policy	H. K. Jain	
Mary Somerville	B. Rubinstein	
Buch, Bibliothek und geisteswissenschaftliche Forschung	R. Heinrich	
Polar Ice Sheets	R. G. Barry	
The Atlas of the Solar System	W. H. McCrea	
Rutherford – Simple Genius	Sir Brian Pippard